Exam IV

Respiratory Drugs

1. All of the following effects are true in relation to H_1-receptor antagonists EXCEPT which one? H_1-receptor antagonists

H1 antagonists do opposite

- Lungs → Constriction
- Vascular smooth muscle → Post-capillary dilation (rubor)
- Vascular endothelial cells → Edema/wheal response endo cells sep.
- Nerves → Itching pain (sensitization)
- ~~Stomach~~ → Zerostomia produced by H1 antagonists

Sedation

1st generation
- Meclizine

2nd generation
- Cetirizine
- Desloratadine
- Fexofenadine
- Olopatadine

(less drowsy)

Mechanism of action
- Selective H1 receptor antagonism

Clinical indications Allergic Rhinitis, urticaria, Atopic allergy

2. In the management of reactive airway disease (~~asthma), the therapeutic~~ emphasis is on prevention with anti-inflammatories (corticosteroids) and bronchodilators.

prevent asthma on the court

3. Which of the following drugs relaxes bronchial smooth muscles by acting on β_2-adrenergic receptors?

Albuterol, Salmeterol.

short acting / long acting

Al flies a Salmon Colored B2 Bomber

4. Which of the following drugs is a selective and competitive leukotriene-receptor antagonist effective in the management of chronic asthma?

Montelukast (Singulair)

5. The respiratory rate of patients with which of the following diagnosis is most likely to be modulated by O_2 concentrations?

COPD Emphysema

Gastrointestinal Drugs

6. The medical management PUD may include all of the following agents EXCEPT which one?

Not Cox-1 Inhibitors

Yes: Sialogogues, Ranitidine (H_2 antagonist), All the "Prazoles" (proton pump inhibitors)

Remove H. Pylori infection, restore protective layer, remove stress/smoking/alcohol/caffeine, Oral hygiene, antibacterial mouthwashes.

PUD Ran to the Sialogogue to PRray

7. Which of the following drugs prescribed for the management of PUD suppresses gastric acid secretion by inhibiting the parietal cells' H+/K+ ATPase?

This is a ATP Aprazole appraisal.

esomeprazole (Nexium) Omeprazole (Prilosec), lansoprazole (Prevacid), rabeprazole (Aciphex), pantoprazole (Protonix),

8. Which of the following major classes of drugs prescribed by oral health care providers is the most likely to cause acute diarrhea? diarrhea cho cho cho

Cholinergic agents, Antibacterial agents, proton pump inhibitors.

Adverse Drug Effects

9. All of the following statements are correct relative to pre-marketing drug evaluation for efficacy and adverse drug events (ADEs) EXCEPT which one? Slide #8

FDA is most rigorous in the world
Study includes 3-4000 subjects
Only a significant finding if complication is found in 1 in 1000
If 1 in 10000, then it would require 30000 subject study
Trials cannot, are not expected to uncover everything.

10. Which of the following adverse drug effects are likely to be associated with the administration of therapeutic dosages of a drug, and are usually predictable and avoidable?

Type A reaction: a) overdose b) Cytotoxic reactions c) drug-drug interaction d) drug – food reaction e) drug – disease reaction

11. The formation of unstable or reactive drug metabolites, which may interact with O_2 and overwhelm antioxidant defense systems or covalently bind to cellular macromolecules ~~are characteristic of: slide 11~~

Type A – Cytotoxic effect. Mechanism: ~~reductive Pathway~~ or Oxidative pathway.

12. All of the following adverse drug effects have a pharmacodynamic basis EXEPT which one? Slide 14-17

1) Pharmacological drug-drug interation: drugs competing for same receptor site (agonists and antagonists at the same receptor)
2) Physiological interations: 2 drugs interacting on different receptors that either enhance or oppose
3) Chemical Interactions: One drug binds to the other drug, inhibiting it from binding its receptor.
4) Drug-related receptor alterations: Chronic drug use increases its own receptors, and/or its adaptability.

13. A pharmacokinetic drug-drug interaction characterized by drug A, usually a weak acid, competing for plasma protein binding with drug B and resulting in increased plasma level of drug B is an example of an interaction that will affect drug B's : ~~slide 21~~

Distribution example: ASA ↑ the plasma level of many drugs

14. A pharmacokinetic drug-drug interaction characterized by drug A increasing bile flow and the synthesis of proteins, which function in conjugation reactions and results in decreased plasma level of drug B is an example of an interaction that will primarily affect drug B's: Slide 27

Biliary Excretion

15. An adverse drug event associated with isoforms of the CYP450 enzyme system (genetic polymorphism), which may lead to significant differences in the efficacy or toxicity of a drug among individuals is ~~an example of~~: Slide 30 or 38

~~Drug-Food Interactions~~ Idiosyncratic Reaction (Type B / pharmacokinetic)

16. Initial exposure to drug A resulted in antigen (drug A)-specific antibody production dominated by the immunoglobulin E (IgE) isotype. Upon re-exposure to drug A, the ~~patient~~ can be expected to experience a: slide 39

Type 1: immediate/anaphylactic allergic reaction

17. A teratogen is a drug, which: slide 45

Substance capable of causing ~~physical~~ or functional **defects in fetus** but non-toxic to mother. Defects occur after 8 weeks... ~~abortion from~~ 3-8 wks, <20 days, all or nothing.

18. An oncogenic ~~drug~~:

Produces Cancer (lympho, Leio, spindle, kaposis) and SCC

19. Which of the following allergic reactions is associated with IgE antibodies fixed in tissue, mainly mast cells?

Anaphylactic/immediate Type I hypersensitivity

20. All of the following adverse drug events are associated with the administration of therapeutic dosages of a drug, are predictable, and are, consequently, preventable EXCEPT which one? Slide 71-85

The Excepts: Allergic rxn, Idiosyncratic rxn, Steven's Johnson, Teratogenic, Oncogenic, pseudoallergic

21. All of the following adverse drug events are generally independent of the dose and are rarely predictable or avoidable EXCEPT which one?

~~Remember #20 exeptions: one of those is the right answer~~ Type B Not Type A

22. All of the following mechanisms are considered to be pharmacodynamic drug-drug interactions EXCEPT which one?

Synergistic effects, antagonistic, competitive, drug-related receptor interaction (up or down regulation), drug-drug binding (chemical). See #12

23. When drug A competes for plasma protein-binding sites with drug B, the interaction will FIRST affect ~~drug~~:

~~**Drug B**~~ Distribution

24. Genetic polymorphism of cytochrome P450 enzyme activity is considered to be the primary factor responsible for:

Idiosyncratic Reactions (Type B) Inter-individual variability in response to drugs

25. When a drug is converted to reactive metabolites capable of covalent binding to DNA, it may produce:

Genetic Mutations, Teratogenic effects. (may produce a cytotoxic reation/oxidative pathway)

~~Oncogenic~~